

Health Science Institute 2011

Final Report

The third ***Health Science Institute*** was held this past July 17 – July 21, 2011 at the Embassy Suites Hotel, Omaha Downtown/Old Market. The **Nebraska Career Education** (NCE) along with **Partnerships for Innovation** (PFI) sponsored the professional education program for teachers across the state of Nebraska. This event provided skill training and knowledge within the area of Health Sciences in order to strengthen the delivery of Health Science curricula in secondary classrooms. *The Health Science Institute* empowered teachers to become involved and educated in the latest fields of medicine while forming professional networks.

Over the past six years, Nebraska high schools have added courses to complete health academies to address the healthcare crisis within the state. One of the challenges schools face is to make certain teachers are equipped with the proper tools to teach within the field.

In addition, significant gaps exist between the workforce supply and demand for health care workers within Nebraska. "We face a looming crisis in the number of health care workers and the professionals we have are not distributed across the state in the same way as our population," said Keith Mueller, Ph.D., formerly professor in University of Nebraska Medical Center's (UNMC) College of Public Health and director of the Nebraska Center for Rural Health Research (NCRHR). The Nebraska Center for Rural Health Research conducted a two-year study on the shortage of health care professionals.

Data from the two-year investigation identified the following shortages:

- Fifty of Nebraska's 93 counties are currently designated primary care Health Professional Shortage Areas
- Forty-five of Nebraska's 93 counties have some level of nursing shortages
- Eighty-eight counties are federally designated mental health shortage areas
- More than one-third of doctors are older than 50
- About one-third of nurses are older than 50
- Forty-percent of pharmacists are older than 50
- About 50 percent of dentists are older than 50 years
- Rural Nebraska has a higher proportion of pre-retirement age workers.

"Nebraska faces an explosion of aging patients but if we begin providing coverage for thousands of uninsured patients, it could push the need for primary care providers to urgent levels," Keith Mueller, Ph.D., said. "We're not ready. Neither are any other states."

There is a limited amount of professional development available to teachers for the health science career pathway. The Nebraska Department of Education does not certify Health Science as a teaching endorsement. Teachers within Health Science come from a wide variety of backgrounds; school nurses, family and consumer science instructors, counselors, science teachers, and health teachers. There is little consistency in programs across the state since most teachers have a tendency to 'lean or bend' toward their own discipline. *The Nebraska Health Science Institute 2011* will provide a common body of knowledge for all teachers, from all backgrounds to teach the Health Science Career Pathway.

After attending the four day event, these teachers will be able to return to their schools and apply the Health Sciences Career Pathway in the classroom. The third ***Health Science Institutes*** goals are as follows:

1. Health Science teachers will become aware of the health care worker crisis.
2. Health Science teachers will be able to implement a successful Medical Terminology class.
3. Health Science teachers will be able to explain five different health science careers available.
4. Health Science teachers will be able to combine and implement new health science curricula into their classroom.

The list to send applications to attend the third ***Health Science Institutes*** was wide-ranging; a list serve from the Nebraska Department of Education Health Science, as well as the monthly newsletter sponsorship through the Partnership for Innovation (PFI), and direct teacher contact across the state were all used. Altogether, seven Community Colleges were contacted to invite faculty.

The appeal explained the ***third Health Science Institutes*** with dates, location, and other information and then stated that the application could be found at the following website. The website was the email address of a Survey Monkey, an online survey tool, to apply for the ***Health Science Institute***. This online tool was used to gather information on each applicant, address, phone number, school, and email address. In addition, questions were asked regarding employment history, subjects currently teaching, their interest in the 2011 ***Health Science Institute*** and how they plan on incorporating the experiences and content in their curriculum. Almost 60 applications came through the Survey Monkey tool and thirty applicants were chosen to attend.

School districts confirmed the attendance of those chosen by April 10, 2011 to approve teachers had support of their travel expenses. Priority was given to those teachers who had not participated in previous ***Health Science Institutes***.

The agenda was filled with pinnacle speakers and two exciting tours. On Sunday, July 17th teachers checked in at 4 PM and at 5 PM they met the Director of Health Science, Human Service and Education, Carol Ringenberg, Lori Palensky, a contract Project Facilitator with the Nebraska Department of Education and Rhonda Wisdom, Professional Assistant for Health Science, FCCLA, and Human Services and Education.

Highlights of the agenda are as follows:

Sunday, July 17

Introduction to Institute, National Standards and Curriculum

- National Consortium for Health Science Education Curriculum
- Medical Terminology Curriculum

Monday, July 18

Carol Ringenberg, Headed in the Right Direction, NCHSE Curriculum

All participants received a CD containing Health Science Instructional Supplements from the National Consortium for Health Science Education.

Mark Bowen, Vice Chancellor for External Affairs, UNMC, The HealthCare Crisis

Mr. Bowen reviewed the workforce supply and demand for health care workers.

Lori Palensky, Medical Terminology for Today's Teachers

Conveyed to the teachers techniques used to assist students in learning Medical Terminology in addition to teaching the subject in an easier manner. Each participant received a Medical Terminology book that could be used as an aide to the one they currently were using.

Deb Brennan, Central Community College, Health Science & the Community College Perspective

Ms. Brennan talked about what instructors are looking for on the community college level as well as the diverse fields of health careers.

Dr. Marsha Morien, UNMC, Your Doctor is a Robot

Dr. Morien is responsible for program development in the areas of minimally invasive and robotic surgery; software applications for medical specialties; and the enhancement of clinical, educational, and research oriented biosecurity preparedness. She discussed and demonstrated different types of medical instruments used in surgery and some that were designed by her. Other robotic devices and software applications were discussed.

Shelly Nielsen, PhD, UNMC, I was a High School Biology Teacher

As a high school biology teacher, Dr. Nielsen changed her career to become a genetic counselor. She explained this transformation, what her existing role is currently and why the change to medicine.

Tuesday, July 19

Clarkson College tour in the morning.

Rebecca Anderson, J.D., M.S., C.G.C., Ethics and the Role They Play

This included an ethics game, developed with Dr. Maurice Godfrey from UNMC. Each teacher was able to take part in playing the game, and then take it with them to use in their classrooms. The increasing role of ethics in medicine -from transplants to end-of-life decisions- has made it important to discuss morals and beliefs.

Ashlie Nelson, High School Alliance, Taking on New Challenges

Ms. Nelson is the teacher from Omaha Public Schools where students from high schools around the Omaha area attend a half-day at UNMC. Ashlie discussed the school system, doctors as teachers and ideas the teachers could use in their own classrooms.

Dr. Virginia Aita, UNMC, Portraits of Care Project

Dr. Aita, with Scottish portrait artist Mark Gilbert presented on the Portraits of Care Project, an exploration of personal image and identity within the medical setting. Mr. Gilbert had just returned to the United States and discussed his role of interviewing patients and painting them.

Wednesday, July 20

Tour at UNMC

Thursday, July 21

50 Quick Lesson Plans

More than 50 Quick Lesson Plans were developed by the teachers during the four day event. These will be placed on the State of Nebraska website for all teachers to use whenever they would need a Quick Lesson

Plan. For instance, when most of the class is on a field trip and only a few students remain or a shortened class period.

HOSA – Health Occupations Students of America

HOSA is a national organization endorsed by the United States of Education and the Health Science Education Division. HOSA has two missions; first to promote career opportunities in the health care industry and second, to enhance the delivery of quality health care to all the population. A brief overview on HOSA was completed and then teachers who had a HOSA chapter at their school discussed how they operated.

Evaluation

An evaluation was prepared and presented to the teachers on Thursday, July 21, 2011 for completion. All 30 evaluations were returned yet not all of the evaluations were completed.

The first question asked how satisfied they were with the registration process.

No one reported being very dissatisfied or dissatisfied. Twenty-five reported being satisfied or very satisfied with the registration process.

The second question posed the question, how satisfied were you with the conference materials provided.

Three were dissatisfied and 22 were satisfied to very satisfied with the conference materials provided.

Comments made after the question were:

- ✓ Would have liked more lesson plans
- ✓ We love “teacher ready” free stuff

Number three, overall, how satisfied were you with the speakers/presenters. One was dissatisfied, 18 were satisfied to very satisfied with the speakers/presenters.

Comments made after the question were:

- ✓ Long PowerPoint’s lacking relevancy at times
- ✓ Got a lot of good info – but had hoped to get some more ideas and cool stuff to do with the kids
- ✓ Should have shorter sessions – many too in depth for our needs
- ✓ Good info – but not enough “hands on” to take back to the classroom
- ✓ Would have liked to see more activities--shown more areas at UNMC

The forth question was about the tours. How satisfied were you with the tour at Clarkson College.

Nineteen were either satisfied or very satisfied with Clarkson College tour. And the comments were:

- ✓ Would have been nice to meet people with the different departments – tour was informative.
- ✓ Tour was good, but how does it help me teach my class – not really

UNMC Tour

Thirteen were dissatisfied and eight satisfied with the UNMC tour. Comments made:

- ✓ Wanted more actual department tours to “see” what they do
- ✓ Would have liked a more comprehensive informative tour – we seemed to be sitting in presentations rather than actually seeing it
- ✓ Didn’t even know where the hospital was located
- ✓ Wanted to see more of the hospital – too many PowerPoint’s
- ✓ Just had PowerPoint’s and speakers – I wanted to see some of the actual hospital and equipment!
- ✓ Needed to actually see the labs – not just sit in classrooms and hear PowerPoint’s – although those speakers were informative
- ✓ Would be nice to see labs

- ✓ Prefer more hospital contact and shorter treks from one to the other
- ✓ Not enough places visited, just speakers

Number five, asked about the content of the conference sessions. Four disagreed, however 20 agree to strongly agree the content was appropriate and informative. Comments included:

- ✓ Would like to have more hands-on or ideas for use in classroom – topics were good though
- ✓ I really needed more in expectations of medical terminology. As a first time teacher what to “cherry pick” what can be skipped. There should have been a session where new med terms sat down with old med term instructors for ideas what to expect etc.
- ✓ Some more information and time spent than was necessary
- ✓ Instead of PowerPoint’s would be nice to have ideas on what we can do with our students
- ✓ Needed more hands-on things
- ✓ Some were good – again see more demonstrations
- ✓ But need the practical, classroom applications of topics

The sixth question asked if the conference was well organized. One disagreed and twenty-three agreed to strongly agree that it was well organized.

On number seven, nineteen stated that they would recommend the *Health Science Institutes* to others. Lastly, the teachers were asked what new skills will you start using in your classroom, learned at the *Health Science Institutes*. The list contains:

- ✓ CHIRS Website in classroom & personally
- ✓ Teambuilding/collaboration activities
- ✓ Career Research – what do people do in various fields get the kids out of the classroom and exploring more
- ✓ Teaching Vocabulary
- ✓ Ideas to incorporate into curriculum
- ✓ Using the institutions as resources
- ✓ More collaboration with local hospital
- ✓ More Medical Terminology lessons throughout the year
- ✓ Start a HOSA Chapter
- ✓ Some contacts I could talk to for opportunities for my students
- ✓ Quick Learns
- ✓ Maybe videos and websites that are great resources
- ✓ Quick Learns
- ✓ Slashing
- ✓ Flash Cards
- ✓ The 5 minute plans
- ✓ I will use the standards
- ✓ I will use the ‘5’ minute plans
- ✓ I will invite more speakers to my classroom
- ✓ The 50 Quick Learns
- ✓ Health Careers Book
- ✓ UNMC Tour
- ✓ More use of medical terminology (better ways to use it)
- ✓ I am more informed on Health Career Options
- ✓ I hope to contact/use speakers/Skype from our new resources
- ✓ Prefix/suffix lists and book for anatomical terms

- ✓ Quick Learns
- ✓ Online sites for information
- ✓ Tell students to start preparing for Health Careers now try improving grads
- ✓ Explain the needs of health careers and its growing field
- ✓ Explain how advanced health care is in NE
- ✓ Beach ball activity
- ✓ Ethics game
- ✓ Use speakers
- ✓ I am anxious to use ideas shared by other teachers
- ✓ Anxious to use the ethics game in Health Careers and Child Development
- ✓ I will plan more tours and speakers for this school year
- ✓ Med Term book usage and ideas
- ✓ Speaker ideas
- ✓ HOSA
- ✓ I will use some/many of the teaching ideas
- ✓ I will use some/many of the standards disk
- ✓ Ideas presented by speakers/resources
- ✓ CD
- ✓ More communication skills
- ✓ More quick learns
- ✓ Contacts for speakers
- ✓ Contacts with other teachers and shared ideas
- ✓ Ideas for hands-on things I hadn't thought about
- ✓ Contact with Dr. to get slides
- ✓ Personal contacts with other teachers
- ✓ Information from disk
- ✓ Awareness of required student skills to be successful in HS
- ✓ Likely a number of the Quick Learns
- ✓ Make more frequent use of UNMC's online materials
- ✓ Tell them about the nursing simulation lab – that was my favorite, wish we could have done more there.
- ✓ Got some more ideas about quick activities – looking forward to seeing more on the website.

The list was more than what could have been expected. It is remarkable that in a short period of time, thirty teachers were given the power (or empowered) to expand their classroom activities and ultimately implement new health science curriculum.

In six months another evaluation is to be developed and sent out to the same thirty teachers. The second evaluation will determine what methods were actually applied and implemented in their schools and classrooms from the **Health Science Institute** 2011 and what suggestions do they have for the next participants. In addition, this will assist in focusing on the 2012 Health Science Institute's goals and objectives.

Yet, most of all, after being given this fantastic opportunity to attend this 2011 program – it is essential to find out, in the six month evaluation, if the teachers did carry out any of these new skills. And if they did, what were the results? And from that, what do they want to do next. As for those who did not get the chance to carry out the new skills, then ask why and who they can be connected with to assist them. With this information, the teachers will become more involved and engaged in the Health Science field.